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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,949	04/22/2002	Hildegard Romer	WE10033	2546

7590

04/26/2005

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EXAMINER
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HUG, ERIC J

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/049,949	<b>Applicant(s)</b> ROMER ET AL.	
	<b>Examiner</b> Eric Hug	<b>Art Unit</b> 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

The following is in response to the amendment filed on January 21, 2005.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper (US 4,004,902) in view of Mantesa (US 4,780,121) and Binder (US 5,268,925).

Pieper discloses a method and device for dyeing glass. Disclosed are a glass melting furnace 15, followed by a heated passage having a vertical portion 1 with heating electrodes 8, 9, a horizontal portion 2, and a downward portion 4 with mechanical agitation, followed by a feeder 13 to a subsequent processing device (not shown). A color feeding device 10 is positioned above the space where the glass is heated by the electrodes (see Figure and column 3, lines 53-56), or may be positioned at the outlet of the melting furnace before the heated passage (see column 3, lines 18-23). The heated passage arrangement provides for strong swirling flow of molten glass. The position of the feeding device in the vicinity of the heated passage provides for good color mixing in a short period of time and allows for rapid color changeover (see e.g., column 4, lines 53-60). There may also be a plurality of dyeing cells arranged downstream of the melting furnace so that several colors can be produced at various points at the same time (see column 4, line 67 to column 5, line 10). Pieper discloses all the claimed elements, arrangements thereof,

Art Unit: 1731

and method steps, except for the claimed skull device. Instead, Pieper utilizes the electrode heated passage described above.

Mantesa discloses a melting device 10 connected to a heated receiving vessel 12 (which completes the melting), a subsequent refining device 35 and an induction heating vessel 20 with short residence time positioned after the heating vessel but before the refining device. Column 3, line 44 to column 4, line 23 describes the induction heated vessel as being characteristic of a skull device; note particularly the frozen layer described in column 4, lines 13-23, which separates the molten material from the vessel walls. This induction heated vessel has a short residence time and high degree of mixing similar to the heated passage of Pieper. However, Mantesa teaches that the induction heated vessel provides several advantages over using devices heated with electrodes, e.g., that the glass melt does not come in contact with the heating source, shorter residence times, smaller vessel, etc. See column 1, lines 12-18 and 36-38, column 2, lines 8-27. Therefore, at the time of the invention, it would have been obvious to one skilled in the art to substitute the heated passage of Peiper with the induction heating vessel, i.e., skull device, of Mantesa to obtain the aforementioned advantages thereof.

The skull device of Mantesa is effectively a skull crucible. Binder is cited here to exemplify that a skull groove is an alternative form of skull device, and would be obvious to use instead of a skull crucible because it provides for a faster throughput rate.

***Response to Arguments***

Applicant's arguments filed January 21, 2005 have been fully considered.

The above rejection is substantially the same as presented for original claims 1-6 in the office action of September 23, 2004. It has been modified to include new claims 7-12 and include the supporting reference Binder.

Applicant argues that Pieper does not disclose or provide any suggestion for utilizing a skull crucible, and further argues that Mantesa does not provide any suggestion for adding a coloring material or stain prior to or within an induction heating vessel (skull crucible).

In response to the arguments, the test for obviousness is not whether the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Applicant also cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the desirability of using an induction furnace (skull device) over an electrode heated device and mechanical

Art Unit: 1731

agitator is clearly suggested by Mantesa as described above. Note also the location of the induction furnace in Mantesa is between the melting furnace and a subsequent refining device, the same as the location as the electrode heating device and mechanical agitator of Pieper, therefore direct substitution of an induction furnace would not alter the addition point of coloring material taught by Pieper.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 1731

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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